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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------|-------------|----------------------|---------------------|------------------|
| 10/645,782 | 08/22/2003 | Keiichiro Kata | 069974-0143 | 8077 |
| 22428 | 7590 | 02/14/2005 | EXAMINER | |
| FOLEY AND LARDNER | | | | PRENTY, MARK V |
| SUITE 500 | | | | ART UNIT |
| 3000 K STREET NW | | | | PAPER NUMBER |
| WASHINGTON, DC 20007 | | | | 2822 |

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/645,782 | KATA ET AL. |
| | Examiner | Art Unit |
| | MARK V. PRENTY | 2822 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 August 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 2-8, 10-12, 15, 16, 26-28 and 30-32 is/are allowed.
- 6) Claim(s) 17-20 is/are rejected.
- 7) Claim(s) 1, 9, 13, 14, 17, 21-25 and 29 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 August 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. 08/533,207.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3 of them</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

This Office Action is in response to the papers filed on August 22, 2003.

Independent claim 1 is objected to because it recites the "a plurality of chip electrodes positioned on said chip section" limitation twice. Correction is required. Claims 9, 13, 17, 21, 25 and 29 depend on independent claim 1 and are therefore similarly objected to.

Claim 9 is further objected to because it does not further limit claim 1.

Claims 13 and 14, which depend on independent claims 1 and 2, respectively, are objected to because they do not further limit claims 1 and 2. Specifically, independent claims 1 and 2 recite, "said interconnection layers extend from said periphery toward said center," and claims 13 and 14 do not further limit claims 1 and 2 in reciting, "wherein the plurality of chip electrodes are positioned on said periphery," because claims 1 and 2's "said interconnection layers extend from said periphery toward said center" means that one end of the interconnection layer is connected to the (periphery) chip electrode and the rest of the interconnection layer extends inwardly (see the specification at column 6, lines 60-67).

Claims 21-24, which depend on independent claims 1-4, respectively, are objected to because they do not further limit claims 1-4. Specifically, independent claims 1-4 recite, "said bump electrodes being located at positions other than over said chip electrodes," (i.e., the bump electrodes do not overlap the chip electrodes), and claims 21-24 do not further limit claims 1-4 in reciting, "wherein said bump electrodes do not overlap said chip electrodes."

Claims 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claims 17-20 are inconsistent with independent claims 1-4, on which they respectively depend. More specifically, independent claims 1-4 recite, "said bump electrodes being located at positions other than over said chip electrodes," but dependent claims 17-20 inconsistently recite: "wherein said bump electrodes overlap said chip electrodes."

Claims 2-8, 10-12, 15, 16, 26-28 and 30-32 are allowable over the prior art of record.

Independent claims 1 and 2 remain allowable over the prior art of record for the reason they were first allowed. Specifically, the prior art of record does not disclose or suggest the claimed semiconductor wafers taken as a whole, including the bump electrodes being located at positions other than over the chip electrodes (i.e., the bump electrodes do not overlap the chip electrodes), and the interconnection layers extending from the (chip electrodes positioned on the) chip section periphery inwardly toward the chip section center.

United States Patent 5,844,304 is related to this application.

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.

Mark Prenty
Mark V. Prenty
Primary Examiner